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Secondary Data Sources
for Individual Firm Variables in an
Ex Ante Growth Impact Model

by

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An analysis of the economic impacts of a new business establishment upon an area should be based on actual data from the firm itself. Unfortunately this is not always possible. Some firms may not be willing to disclose such information. Businesses with multiple locations may not have the needed data for a single given site. New businesses have no past records to check and may not know what to expect. Additionally, analyzing the general types of firms which a community might like to attract necessitates the use of secondary data sources. While such data are clearly inferior to those obtained directly from a specific firm, on many occasions using secondary data is the only alternative available.

The purpose of this paper is to describe the data sources and procedures for estimating various characteristics of business establishments, given only an establishment's Standard Industrial Code (SIC) number. The characteristics to be considered here are: sales, profits (before taxes), the number of jobs, average annual earnings per employee, annual payroll, inventory, machinery and equipment value, and structures and buildings value. These characteristics may be estimated for an average firm with a given 4-digit SIC number. The procedures outlined below cover only firms in manufacturing, wholesale trade, and retail trade.

Due to data limitations, the machinery and equipment value and structures and buildings value for wholesale trade and retail trade are generally based on a 2-digit SIC number. In these cases the results should be used with caution.

The latest state or national data are used, with the age of the data usually taking precedent over the geographic source of the numbers and state data taking precedent over national figures. Most of the information is from 1976 and 1977 though some is from 1972. A price index is used to inflate all dollar values to 1978 levels and a location ratio adjusts earnings and payroll figures to reflect the generally lower wage rates of Southeastern Ohio.

Manufacturing

Statistics from Ready-Mixed Concrete (SIC 3273) will be used to provide an example.

$$\begin{aligned}\text{Sales} &= \left[\frac{\text{Value of Industry Shipments (Ohio data from Annual Survey of} \right. \\ &\quad \left. \text{Manufactures 1976, M76(AS)-6) / Number of Establishments (Ohio} \right. \\ &\quad \left. \text{data from 1976 County Business Patterns, CBP-76-37)} \right] \times \\ &\quad \text{Inflation Factor (see Table 1)} \\ &= (\$137,900,000/242) \times 1.201 \\ &= \$684,371\end{aligned}$$

$$\begin{aligned}\text{Profit} &= \text{Sales} \times \text{Gross Profit on Net Sales Ratio (see Table 2)} \\ &= \$684,371 \times 0.0760 \\ &= \$52,012\end{aligned}$$

$$\begin{aligned}\text{Number of Jobs} &= \frac{\text{Number of Employees (Ohio data from 1976 County} \\ &\quad \text{Business Patterns, CBP-76-37) / Number of Establishments} \\ &\quad \text{(Ohio data from 1976 County Business Patterns,} \\ &\quad \text{CPB-76-37)}}{242} \\ &= 2980/242 \\ &= 12.3\end{aligned}$$

$$\begin{aligned}\text{Average Earnings} &= \frac{\text{Average Weekly Earnings (see Table 3)} \times 52 \times \text{Inflation}}{\text{Factor (see Table 1)} \times \text{Ratio of Average Weekly}} \\ &\quad \text{Earnings (see Table 4)} \\ &= \$264.60 \times 52 \times 1.100 \times .757 \\ &= \$11,457\end{aligned}$$

$$\begin{aligned}\text{Payroll} &= \text{Number of Jobs} \times \text{Average Earnings} \\ &= 12.3 \times \$11,457 \\ &= \$140,921\end{aligned}$$

$$\begin{aligned}\text{Inventory} &= \frac{[\text{End-of-Year Inventories (Ohio data from Annual Survey of} \\ &\quad \text{Manufactures 1976, M76(AS)-6)] / \text{Number of Establishments} \\ &\quad \text{(Ohio data from 1976 County Business Patterns, CBP-76-37)]}{\text{Inflation Factor (see Table 1)}} \\ &= (\$4,500,000/242) \times 1.174 \\ &= \$21,831\end{aligned}$$

$$\begin{aligned}\text{Machinery and} \\ \text{Equipment Value} &= \frac{[\text{Machinery and Equipment (National data from Annual} \\ &\quad \text{Survey of Manufactures 1976, M76(AS)-5)] / \text{Number of} \\ &\quad \text{Establishments (National data from 1976 County} \\ &\quad \text{Business Patterns, CBP-76-1)]}{\text{Inflation Factor} \\ &\quad \text{(see Table 1)}} \\ &= (\$1,943,100,000/4847) \times 1.174 \\ &= \$470,642\end{aligned}$$

$$\begin{aligned}\text{Structures and} \\ \text{Buildings Value} &= \frac{[\text{Structures and Buildings (National data from Annual} \\ &\quad \text{Survey of Manufactures 1976, M76(AS)-4)] / \text{Number of} \\ &\quad \text{Establishments (National data from 1976 County} \\ &\quad \text{Business Patterns, CBP-76-1)]}{\text{Inflation Factor} \\ &\quad \text{(see Table 1)}} \\ &= (345,600,000/4847) \times 1.174 \\ &= \$83,708\end{aligned}$$

Wholesale Trade

Statistics from Beer and Ale (SIC 5181) will be used for this example.

Sales = [Sales (National data from December 1976 Monthly Wholesale Trade, BW-76-12) / Number of Establishments (National data from 1976 County Business Patterns, CBP-76-1)] x Inflation Factor (see Table 1)

$$= (\$9,623,000,000/4587) \times 1.201$$

$$= \$2,519,560$$

Profit = Sales x Gross Profit on Net Sales Ratio (see Table 2)

$$= \$2,519,560 \times 0.0333$$

$$= \$83,901$$

Number of Jobs = Number of Employees (Ohio data from 1976 County Business Patterns, CBP-76-37) / Number of Establishments (Ohio data from 1976 County Business Patterns, CBP-76-37)

$$= 4028/163$$

$$= 24.7$$

Average Earnings = Average Weekly Earnings (see Table 3) x 52 x Inflation Factor (see Table 1) x Ratio of Average Weekly Earnings (see Table 4)

$$= \$225.22 \times 52 \times 1.100 \times .763$$

$$= \$9829$$

Payroll = Number of Jobs x Average Earnings

$$= 24.7 \times \$9829$$

$$= \$242,776$$

Inventory = [Inventory (National data from December 1976 Monthly Wholesale Trade, BW-76-12) / Number of Establishments (National data from 1976 County Business Patterns, CBP-76-1)] x Inflation Factor (see Table 1)

$$= (\$1,925,000,000/4587) \times 1.174$$

$$= \$492,686$$

Machinery and

$$\begin{aligned} \text{Equipment Value} = & \frac{[[[\text{Machinery and Equipment Expenditures/Total} \\ & \text{Capital Expenditures}] \times \text{Value of Fixed Assets (all} \\ & \text{three National data from 1972 Census of Wholesale} \\ & \text{Trade, WC72-S-5)]] / \text{Number of Establishments (National} \\ & \text{data from 1972 Census of Wholesale Trade, WC72-S-1)]]}{7012} \times \\ & \text{Inflation Factor (see Table 1)} \end{aligned}$$

$$= \frac{(\$60,000,000/\$99,000,000) \times \$627,000,000}{7012} \times 1.608$$

$$= \$87,142$$

Structures and

$$\begin{aligned} \text{Buildings Value} = & \frac{[[[\text{Buildings Expenditures/Total Capital Expenditures}] \times \\ & \text{Value of Fixed Assets (all three National data from} \\ & \text{1972 Census of Wholesale Trade, WC72-S-5)]] / \text{Number of} \\ & \text{Establishments (National data from 1972 Census of} \\ & \text{Wholesale Trade, WC72-S-1)]]}{7012} \times \text{Inflation Factor (see} \\ & \text{Table 1)} \end{aligned}$$

$$= \frac{(\$39,000,000/\$99,000,000) \times \$627,000,000}{7012} \times 1.608$$

$$= \$56,642$$

Retail Trade

Statistics from Furniture Stores (SIC 5712) will be used for the example.

$$\begin{aligned} \text{Sales} = & \frac{[\text{Sales (National data from December 1976 Monthly Retail Trade} \\ & \text{BR-76-12) / Number of Establishments (National data from 1976} \\ & \text{County Business Patterns, CBP-76-1)]]}{7012} \times \text{Inflation Factor (see} \\ & \text{Table 1)} \end{aligned}$$

$$= (\$12,103,000,000/28,338) \times 1.201$$

$$= \$512,940$$

Profit = Sales x Gross Profit on Net Sales Ratio (see Table 2)

$$= \$512,940 \times .036$$

$$= \$18,466$$

Number of Jobs = Number of Employees (Ohio data from 1976 County

Business Patterns, CBP-76-37)/Number of Establishments

(Ohio data from 1976 County Business Patterns,

CBP-76-37)

$$= 9708/1168$$

$$= 8.3$$

Average Earnings = Average Weekly Earnings (see Table 3) x 52 x Inflation

Factor (see Table 1) x Ratio of Average Weekly

Earnings (see Table 4)

$$= \$128.73 \times 52 \times 1.100 \times .763$$

$$= \$5419$$

Payroll = Number of Jobs x Average Earnings

$$= 8.3 \times \$5419$$

$$= \$44,978$$

Inventory = Sales/Sales-Inventory Ratio (National data from Table 1423,

1977 U. S. Statistical Abstract)

$$= \$512,940/5.6$$

$$= \$91,596$$

Machinery and

Equipment Value = [[[New Machinery and Equipment Expenditures/Total

Capital Expenditures] x Value of Fixed Assets (all

three National data from 1972 Census of Retail

Trade, RC72-S-2)]/Number of Establishments (National

data from 1972 Census of Retail Trade, RC72-S-1)] x

Inflation Factor (see Table 1)

$$= (\$142,000,000/\$350,000,000) \times \$2,311,000,000 \times 1.608$$

$$116,857$$

$$= \$12,902$$

Structures and

$$\begin{aligned} \text{Buildings Value} &= \frac{[[[\text{New Structures and Additions Expenditures/Total} \\ &\quad \text{Capital Expenditures}] \times \text{Value of Fixed Assets (all} \\ &\quad \text{three National data from 1972 Census of Retail} \\ &\quad \text{Trade, RC72-S-2)]/Number of Establishments (National} \\ &\quad \text{data from 1972 Census of Retail Trade, RC72-S-1)] \times} \\ &\quad \text{Inflation Factor (see Table 1)} \\ &= \frac{(\$175,000,000/\$350,000,000) \times \$2,311,000,000}{116,857} \times 1.608 \\ &= \$15,900 \end{aligned}$$

Table 1: INFLATION FACTORS

	Consumer Price Index ¹ (1967=100.0)	Inflation Factor ²
1972		
December	127.3	1.608
Annual Average	125.3	1.634
1976		
December	174.3	1.174
Annual Average	170.5	1.201
1977		
December	186.1	1.100
Annual Average	181.5	1.128
1979		
January	204.7	1.000

¹ Monthly Labor Review

² Calculated by dividing the January 1979 CPI by the CPI from the time period for which the factor is being figured.

Table 2: PROFIT BY INDUSTRIAL DIVISION¹

Division	Gross Profit on Net Sales, 1976 (percent)	Division	Gross Profit on Net Sales, 1976 (percent)
Manufacturing	7.78	Manufacturing (continued)	
Food & Kindred Products	5.30	Iron & Steel	5.00
Tobacco Manufactures	13.68	Nonferrous Metals	3.88
Textile Mill Products	4.38	Fabricated Metal Products	7.93
Printing & Publishing	9.35	Machinery, Except Electrical	9.93
Chemicals & Allied Products	11.05	Electrical & Electronic Equipment	7.25
Industrial Chemicals & Synthetics	11.15	Instruments & Related Products	12.00
Drugs	14.28	Transportation Equipment	6.58
Paper & Allied Products	8.48	Motor Vehicles & Equipment	7.20
Petroleum & Coal Products	10.33	Aircraft, Guided Missiles, & Parts	5.18
Rubber & Miscellaneous Plastics Products	6.25	Other Durable Manufacturing Products	6.70
Other Nondurable Manufactur- ing Products	5.00	Mining	15.08
Stone, Clay, & Glass Products	7.60	Retail Trade	3.60
Primary Metal Industries	4.65	Wholesale Trade	3.53

¹Derived from figures in The Dow Jones-Irwin Business Almanac 1978, pp. 114-139.

Table 3

HOURS AND GROSS EARNINGS OF PRODUCTION OR NONSUPERVISORY WORKERS IN OHIO^a
DECEMBER 1977

Industry	Average Weekly Earnings ↓			Average Weekly Hours			Average Hourly Earnings		
	December 1977 ^b	November 1977 ^c	December 1976 ^c	Dec. 1977 ^b	Nov. 1977 ^c	Dec. 1976 ^c	Dec. 1977 ^b	Nov. 1977 ^c	Dec. 1976 ^c
TOTAL .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
MANUFACTURING	\$296.92	\$295.53	\$269.86	42.6	42.4	42.1	\$ 6.97	\$ 6.97	\$ 6.41
Durable Goods ^d	306.45	305.44	276.60	42.8	42.6	42.1	7.16	7.17	6.57
Lumber and wood products	179.78	180.24	180.45	39.6	39.7	39.4	4.54	4.54	4.58
Furniture and fixtures	222.75	217.06	211.04	40.5	39.9	41.3	5.50	5.44	5.11
Household furniture	196.06	189.47	180.98	38.9	38.2	38.1	5.04	4.96	4.75
Stone, clay, and glass products	264.60	267.34	245.50	42.0	42.3	42.4	6.30	6.32	5.79
Glass and glassware, pressed or blown	254.96	261.39	235.53	39.9	40.4	40.4	6.39	6.47	5.83
Structural clay products	204.40	208.47	184.46	41.8	42.2	40.9	4.89	4.94	4.51
Pottery and related products	196.50	193.22	185.72	39.3	38.8	39.6	5.00	4.98	4.69
Primary metal industries	335.37	343.21	300.29	40.7	41.4	40.2	8.24	8.29	7.47
Blast furnace and basic steel products	350.55	353.60	317.60	39.7	40.0	40.0	8.83	8.84	7.94
Iron and steel foundries	345.05	340.77	305.59	43.9	43.3	42.8	7.86	7.87	7.14
Nonferrous rolling and drawing	297.33	344.43	247.80 ^g	37.4	41.8	35.0 ^g	7.95	8.24	7.08
Nonferrous foundries	267.54	263.76	251.18	42.4	42.0	42.5	6.31	6.28	5.91
Fabricated metal products	304.40	302.60	276.68	43.3	42.8	42.5	7.03	7.07	6.51
Cutlery, hand tools, and hardware	288.96	288.27	272.61	42.0	41.9	42.2	6.88	6.88	6.46
Plumbing and heating, except electric	241.76	233.60	217.46	40.7	40.0	39.9	5.94	5.84	5.45
Fabricated structural metal products	257.91	259.36	241.61	41.8	41.9	41.3	6.17	6.19	5.85
Screw machine products, bolts, etc. ..	284.91	267.53	246.10	43.9	42.6	43.1	6.49	6.28	5.71
Metal forgings and stampings	372.91	368.45	334.52	44.5	43.5	43.5	8.38	8.47	7.69
Machinery, except electrical	301.02	295.41	267.54	43.5	43.0	42.4	6.92	6.87	6.31
Construction and related machinery ...	308.00	303.03	262.67	42.6	42.5	41.3	7.23	7.13	6.36
Metalworking machinery	308.19	302.84	282.74	44.6	43.7	43.7	6.91	6.93	6.47
Special industry machinery	285.12	275.41	267.52	44.0	43.1	44.0	6.48	6.39	6.08
General industrial machinery	284.28	285.49	252.10	41.5	41.8	40.4	6.85	6.83	6.24
Electric and electronic equipment	263.69	254.61	241.53	42.6	41.4	41.5	6.19	6.15	5.82
Electrical industrial apparatus	263.84	257.00	225.33	42.9	42.2	40.6	6.15	6.09	5.55
Household appliances	259.89	245.22	219.57	43.1	40.6	39.0	6.03	6.04	5.63
Electric lighting and wiring equipment	253.78	253.15	256.08	41.4	41.5	43.7	6.13	6.10	5.86
Communication equipment	311.64	295.80	306.50	42.4	40.8	44.1	7.35	7.25	6.95
Transportation equipment	375.54	381.14	337.79	45.3	45.7	44.8	8.29	8.34	7.54
Motor vehicles and equipment	392.77	399.90	354.49	46.1	46.5	45.8	8.52	8.60	7.74
Aircraft and parts	311.32	307.64	273.08	41.9	42.2	40.1	7.43	7.29	6.81
Instruments and related products	202.70	192.76	186.33	41.2	39.5	39.9	4.92	4.88	4.67
Nondurable Goods^e	270.06	266.88	252.18	42.0	41.7	42.1	6.43	6.40	5.99
Food and kindred products	274.99	272.00	256.20	42.7	42.5	42.7	6.44	6.40	6.00
Meat products	325.53	306.72	297.26	44.9	43.2	44.7	7.25	7.10	6.65
Dairy products	264.88	259.42	244.08	44.0	43.6	43.2	6.02	5.95	5.65
Bakery products	260.12	255.50	229.64	40.9	40.3	40.5	6.36	6.34	5.67
Beverages	262.28	301.60	249.35	42.1	46.4	43.9	6.23	6.50	5.68
Textile mill products	217.67	208.69	175.72	41.7	41.0	39.4	5.22	5.09	4.46
Apparel and other textile products	145.12	150.78	138.22	36.1	37.6	35.9	4.02	4.01	3.85
Paper and allied products	290.46	272.89	257.07	46.4	44.3	45.1	6.26	6.16	5.70
Paper mills, except building paper ...	339.50	335.58	321.56	48.5	47.0	49.7	7.00	7.14	6.47
Misc. converted paper products	267.67	243.65	232.05	45.6	43.2	44.2	5.87	5.64	5.25
Paperboard containers and boxes	266.26	248.94	226.80	44.9	42.7	42.0	5.93	5.83	5.40
Printing and publishing	277.60	273.31	264.37	39.6	39.1	39.4	7.01	6.99	6.71
Newspapers	275.54	279.82	262.59	35.1	35.6	35.2	7.85	7.86	7.46
Commercial printing	297.20	281.99	280.13	41.8	40.4	41.5	7.11	6.98	6.75
Chemicals and allied products	285.05	284.99	257.00	42.8	42.6	42.2	6.66	6.69	6.09
Industrial inorganic chemicals	295.10	301.18	284.68	42.4	42.3	44.0	6.96	7.12	6.47
Petroleum and coal products	373.22	371.07	330.72	43.6	43.4	42.4	8.56	8.55	7.80
Rubber and misc. plastics products	270.22	270.45	267.35	41.7	41.8	43.9	6.48	6.47	6.09
Tires and inner tubes	329.09	330.65	358.18	42.3	42.5	48.6	7.78	7.78	7.37
Miscellaneous plastics products	263.08	263.11	246.61	41.3	41.5	42.3	6.37	6.34	5.83
Leather and leather products	151.40	150.66	125.86	40.7	40.5	36.8	3.72	3.72	3.42

See footnotes at end of table.

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT IN OHIO^a
DECEMBER 1977 (Continued)

Industry	Employment (in thousands)			Percent Change From ^d	
	December 1977 ^b	November 1977 ^c	December 1976 ^e	November 1977	December 1976
NONMANUFACTURING	2921.2	2929.1	2860.5	- .3	2.1
MINING	17.1	29.3	28.7	- 41.6	- 40.3
Bituminous coal and lignite mining	5.0 ^g	16.9	16.9	- 70.7	- 70.7
CONSTRUCTION	150.5	162.7	151.6	- 8.1	- .8
TRANSPORTATION AND PUBLIC UTILITIES	218.6	217.8	215.0	.3	1.6
Railroad transportation	32.0	32.0	32.8	.0	- 2.4
Transportation, except railroads	99.3	98.6	94.8	.6	4.7
Communication, electric, gas services ..	87.3	87.1	87.4	.2	- .1
Communication	49.8	49.8	50.2	.1	- .7
Electric, gas, and sanitary services ..	37.4	37.3	37.2	.3	.6
WHOLESALE AND RETAIL TRADE	932.0	938.7	932.4	2.0	2.6
Wholesale Trade	217.3	216.6	211.4	.3	2.8
Wholesale trade-durable goods	141.9	141.5	137.3	.3	3.4
Motor vehicles & automotive equipment ..	21.1	21.2	20.4	- .3	3.7
Electrical goods	17.7	17.8	17.6	- .2	.7
Machinery, equipment, and supplies ...	56.5	56.2	54.2	.5	4.3
Wholesale trade-nondurable goods	75.3	75.1	74.2	.3	1.6
Groceries and related products	22.4	22.3	21.9	.7	2.5
Retail Trade	739.8	722.1	721.0	2.4	2.6
General merchandise stores	146.2	135.1	144.0	7.7	1.5
Department stores	132.2	122.5	130.1	7.9	1.7
Food stores	115.5	113.5	114.8	1.8	.7
Automotive dealers & service stations ..	95.3	95.1	93.1	.2	2.4
Apparel and accessory stores	40.4	37.4	39.0	8.0	3.7
FINANCE, INSURANCE, AND REAL ESTATE	183.2	182.2	177.5	.6	3.2
Banking	52.8	52.6	52.4	.4	2.7
Credit agencies other than banks	27.2	27.0	26.3	.7	4.2
Insurance carriers	52.5	52.4	51.5	.3	2.1
SERVICES AND MISCELLANEOUS INDUSTRIES	741.5	747.0	713.1	- .7	4.0
Laundry, cleaning, & garment services ..	17.8	17.9	18.3	.5	- 3.0
Health services	246.2	246.7	235.6	- .2	4.5
GOVERNMENT	653.3	650.5	642.1	.4	1.7
Federal government	92.1	91.8	92.1	.3	.0
State government	139.8	136.9	123.9	2.1	12.8
State government, except education ...	67.4	66.8	63.1	1.0	6.8
State government education	72.3	70.1	60.8	3.1	19.0
Local government	421.4	421.8	426.1	- .1	- 1.1
Local government, except education ...	183.1	183.5	177.7	- .2	3.0
Local government education	238.4	238.3	248.3	.0	- 4.0

^aEstimated in cooperation with U. S. Bureau of Labor Statistics. Based on March 1976 benchmark. Includes full and part-time wage and salaried workers employed during pay periods which include the 12th of the month. Excludes self-employed, domestics, and armed forces. Subtotals may not add to totals, because of rounding or exclusion of minor groups. ^bPreliminary. ^cRevised. ^dBased on unrounded figures. ^eIncludes miscellaneous manufacturing. ^fIncludes tobacco manufacture. ^gDepressed due to labor-management disputes.

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HOURS AND GROSS EARNINGS OF PRODUCTION OR NONSUPERVISORY WORKERS IN OHIO^a
DECEMBER 1977 (Continued)

Industry	Average Weekly Earnings			Average Weekly Hours			Average Hourly Earnings		
	December 1977 ^b	November 1977 ^c	December 1976 ^c	Dec. 1977 ^b	Nov. 1977 ^c	Dec. 1976 ^c	Dec. 1977 ^b	Nov. 1977 ^c	Dec. 1976 ^c
NONMANUFACTURING .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
MINING	\$253.86	\$255.63	\$288.15	43.1	42.4	39.8	\$ 5.89	\$ 7.68	\$ 7.24
Bituminous coal and lignite mining	261.02	351.48	315.32	41.3	40.4	38.5	6.32	8.70	8.19
CONSTRUCTION	371.36	379.04	375.21	35.2	36.8	37.9	10.55	10.30	9.90
TRANSPORTATION AND PUBLIC UTILITIES .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Railroad transportation .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Transportation, except railroads .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Communication, electric, gas services ..	302.00	300.44	269.06	41.2	41.1	40.4	7.33	7.31	6.66
Communication	291.37	289.84	259.64	40.3	40.2	39.7	7.23	7.21	6.54
Electric, gas, and sanitary services ..	316.63	314.71	282.35	42.5	42.3	41.4	7.45	7.44	6.82
WHOLESALE AND RETAIL TRADE^f	149.10	145.95	140.24	35.0	34.1	34.8	4.26	4.28	4.03
Wholesale Trade	223.34	222.39	208.96	39.6	39.5	39.5	5.64	5.63	5.29
Wholesale trade-durable goods	222.08	221.92	209.62	39.8	39.7	39.7	5.58	5.59	5.28
Motor vehicles & automotive equipment ..	216.11	218.40	191.90	39.8	40.0	38.0	5.43	5.46	5.05
Electrical goods	183.53	182.52	170.28	39.3	39.0	38.7	4.67	4.68	4.40
Machinery, equipment, and supplies ...	224.93	226.46	214.12	39.6	39.8	39.8	5.68	5.69	5.38
Wholesale trade-nondurable goods	225.22	222.69	207.09	39.1	39.0	39.0	5.76	5.71	5.31
Groceries and related products	244.61	233.28	222.22	41.6	40.5	41.0	5.88	5.76	5.42
Retail Trade ^f	128.73	125.24	122.30	33.7	32.7	33.6	3.82	3.83	3.64
General merchandise stores	115.58	109.76	110.54	34.4	32.0	33.6	3.36	3.43	3.29
Department stores	115.60	110.75	111.88	34.2	32.1	33.7	3.38	3.45	3.32
Food stores	207.75	199.50	185.48	36.9	35.0	34.8	5.63	5.70	5.33
Automotive dealers & service stations ..	161.20	168.00	166.87	38.2	38.8	40.8	4.22	4.33	4.09
Apparel and accessory stores	105.91	95.17	97.68	33.2	30.6	33.0	3.19	3.11	2.96
FINANCE, INSURANCE, AND REAL ESTATE .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Banking	139.86	139.11	134.94	.....	.....	.....	.....	.....	.....
Credit agencies other than banks	145.43	145.53	139.03	.....	.....	.....	.....	.....	.....
Insurance carriers .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
SERVICES AND MISCELLANEOUS INDUSTRIES .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Laundry, cleaning, & garment services ..	.....	.....	.....	.....	.....	.....	.....	.....	.....
Health services .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
GOVERNMENT .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Federal government .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State government .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
State government, except education ...	.....	.....	.....	.....	.....	.....	.....	.....	.....
State government education .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Local government .....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Local government, except education ...	.....	.....	.....	.....	.....	.....	.....	.....	.....
Local government education .....	.....	.....	.....	.....	.....	.....	.....	.....	.....

^aEstimated in cooperation with U.S. Bureau of Labor Statistics. Data relate to full and part-time production workers in manufacturing (nonsupervisory employees in nonmanufacturing) employed during pay periods which include the 12th of the month. Average earnings are computed from gross payroll before tax and other deductions. Includes pay for overtime, incentive bonuses paid regularly, holidays, vacations, and sick leave. Excludes special bonuses, retroactive pay, and payments in kind. ^bPreliminary. ^cRevised. ^dIncludes miscellaneous manufacturing. ^eIncludes tobacco manufactures. ^fMoney payments only, tips not included. ^gLow due to labor-management disputes during part of pay period.

NONAGRICULTURAL WAGE AND SALARY EMPLOYMENT IN AKRON METROPOLITAN AREA^a
DECEMBER 1977

Industry	Employment (in thousands)			Percent Change From ^d	
	December 1977 ^b	November 1977 ^c	December 1976 ^c	November 1977	December 1976
TOTAL	259.6	258.7	254.2	.4	2.1
MANUFACTURING	83.9	83.8	82.9	.1	1.2
Durable Goods ^e	39.4	39.2	37.2	.5	5.9
Stone, clay, and glass products	1.8	1.9	2.1	- 5.0	- 14.6
Fabricated metal products	16.6	16.3	16.09	1.6	3.9
Machinery, except electrical	11.7	11.7	10.0	.5	16.7
Special industry machinery	2.6	2.6	2.7	- .2	- 2.5
Nondurable Goods ^f	44.5	44.6	45.7	- .3	- 2.7
Food and kindred products	3.0	3.0	2.9	.3	3.3
Chemicals and allied products	3.4	3.3	3.2	1.1	5.8
Rubber and misc. plastics products	32.3	33.5	35.0	- .6	- 4.7
Tires and inner tubes	26.8	27.0	28.6	- .8	- 6.1
NONMANUFACTURING	175.7	174.9	171.3	.5	2.6
MINING .....	.3	.3	.3	- 4.2	.0
CONSTRUCTION	6.5	7.1	6.7	- 8.6	- 3.7
TRANSPORTATION AND PUBLIC UTILITIES	14.3	14.4	13.9	- .5	2.7
Communication, electric, gas services ..	5.2	5.2	5.1	.4	2.2
WHOLESALE AND RETAIL TRADE	59.7	59.3	57.7	2.3	3.5
Wholesale trade	11.2	11.1	10.6	.9	5.6
Retail trade	48.5	47.2	47.0	2.7	3.0
FINANCE, INSURANCE, AND REAL ESTATE	9.0	8.9	8.6	.4	3.8
SERVICES AND MISCELLANEOUS INDUSTRIES	44.1	44.5	42.1	- .9	4.6
GOVERNMENT	41.9	41.3	42.7	1.4	- .1
State government (includes education) ..	13.1	13.0	12.9	.3	1.4
Local government (includes education) ..	26.7	26.2	27.0	1.7	- 1.1

^aEstimated in cooperation with U.S. Bureau of Labor Statistics. Akron area is defined as Portage and Summit Counties. Based on March 1976 benchmark. Includes full and part-time wage and salaried workers employed during pay periods which include the 12th of the month. Excludes self-employed, domestics, and armed forces. Subtotals may not add to totals, because of rounding or exclusion of minor groups. ^bPreliminary. ^cRevised. ^dBased on unrounded figures. ^eIncludes lumber and wood products; furniture and fixtures; primary metal industries; electric and electronic equipment; transportation equipment; instruments and related products; miscellaneous manufacturing. ^fIncludes tobacco manufactures; textile mill products; apparel and other textile products; paper and allied products; printing and publishing; petroleum and coal products; leather and leather products. ^gDepressed due to labor-management disputes.

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Table 4: RATIO OF AVERAGE WEEKLY EARNINGS
IN THE GROW REGION TO THE STATE
BY INDUSTRIAL DIVISION - 1977

	Average Weekly Earnings, GROW Region	Average Weekly Earnings, Ohio	Ratio
All Industries	\$195.78	\$232.18	.843
Mining	271.18	321.98	.842
Construction	270.07	291.34	.927
Manufacturing	223.35	295.13	.757
Transportation and Utilities	272.65	307.62	.886
Wholesale and Retail Trade	128.35	168.13	.763
Finance, Insurance, and Real Estate	155.52	205.48	.757
Services	136.90	170.83	.801
State and Local Government	202.55	215.01	.942

¹Derived from various Ohio Bureau of Employment Services reports.